

## NETWORK-ENABLED USER DEVICE CHARGER

### BACKGROUND

Users are increasingly utilizing user devices, such as tablets and smartphones, in many different environments and can access data over cellular networks from virtually anywhere. In many instances, the cost associated with downloading or accessing data outside of a local wireless network may be expensive and time-consuming, especially if there are many people attempting to do the same thing at the same time. The cellular network may have bandwidth issues and the user may not be able to obtain data quickly in response to a request for content. Additionally, when the user has requested data, they may want to view or interact with the content immediately, but the size of the requested content may prohibit the user from immediate access, as the user device may require time to download the requested data.

### BRIEF DESCRIPTION OF THE DRAWINGS

The detailed description is set forth with reference to the accompanying drawings. The use of the same reference numerals indicates similar or identical components or elements; however, different reference numerals may be used as well to indicate components or elements which may be similar or identical. Various embodiments of the disclosure may utilize elements and/or components other than those illustrated in the drawings, and some elements and/or components may not be present in various embodiments. Depending on the context, singular terminology used to describe an element or a component may encompass a plural number of such elements or components and vice versa.

FIG. 1 depicts an illustrative data flow between various components of an illustrative system architecture for a network-enabled user device charger in accordance with one or more embodiments of the disclosure.

FIG. 2 is a block diagram including various hardware and software components of the illustrative system architecture depicted in FIG. 1 in accordance with one or more embodiments of the disclosure.

FIG. 3 is a process flow diagram of an illustrative method for determining content to provide to a network-enabled user device charger by a content server in accordance with one or more embodiments of the disclosure.

FIG. 4 is a process flow diagram of an illustrative method for data transfer management on a network-enabled user device charger in accordance with one or more embodiments of the disclosure.

### DETAILED DESCRIPTION

This disclosure relates to, among other things, systems, methods, computer-readable media, techniques and methodologies for a network-enabled user device charger. The network-enabled user device charger may include built-in connectivity capabilities to a wireless network and contain embedded storage for storing data, such as multimedia content, games, documents, and the like. Although any type of network may be used with a network-enabled user device charger, and embodiments are not limited to any type of network, a WiFi network will be used as an example herein.

In some embodiments, the network-enabled user device charger may include embedded storage. The storage may be used, for example, to store data received from a remote

server. The data may then be transmitted to the user device while it is connected to the network-enabled user device charger as it is being charged. In some embodiments, the data stored in the data storage may be transmitted to the user device over a wireless network. The network-enabled user device charger may include one or more processors, an antenna, data storage, and a connector (e.g., universal serial bus (USB) plug). In some embodiments, the connector mounted on the user device may be called a receptacle and the connector attached to the network-enabled user device charger may be called a plug. The receptacle is designed to be connected to the plug where the plug is inserted into the receptacle. When the plug is inserted into the receptacle, data may be transmitted between the user device and the network-enabled user device charger. Additionally, when the plug of the network-enabled user device charger is inserted into the receptacle of the user device, power may be transmitted from the network-enabled user device charger to the user device. The antenna of the network-enabled user device charger may run along the length of a cable of the charger to maximize the wireless reception of the charger. In some embodiments, the necessary hardware may be enclosed in a housing of the network-enabled user device charger. In some embodiments, the network-enabled user device charger may have connectivity capabilities initiated with near field communication (NFC) if the connected user device is capable of induction charging.

In some embodiments, the network-enabled user device charger may be associated with a cloud-based web application to configure all the settings and interact with the software capabilities of the charger. The network-enabled user device charger may also be associated with a user device based application to configure all the settings and interact with a set of software capabilities of the charger. The cloud-based web application and/or the user device based application may include the capability to configure network settings associated with the charger, register one or more user accounts in association with the charger, and/or present any data or metrics obtained and/or generated by the charger. In some embodiments, the data for the network-enabled user device charger may be stored in the cloud and all data transfers may occur at times to optimize data flow to and/or from the user device and/or the cloud.

In some embodiments, the cloud-based web application and/or user device based application may have the ability to queue content to synchronize from the cloud to the network-enabled user device charger and to configure manual or automatic throttle of data transfers over the wireless network. In some embodiments, the data may be throttled based on off peak hours. In some embodiments, the data may be synchronized wirelessly if the user device is present on the same wireless network as the network-enabled user device charger.

In some embodiments, the network-enabled user device charger may be associated with multiple user accounts and may be able to detect specific devices, which may permit the charger to identify which device is connected and synchronize and/or fetch data from a server based on preferences associated with the specific user device.

In some embodiments, the network-enabled user device charger may have multiple device capabilities for the charger to serve the same function for multiple devices potentially, but not necessarily across multiple user accounts. For instance, the network-enabled user device charger may have the ability to support a single or multiple devices across the